

647.9711/B 100355

## Work Order ID 100355

April-22-13 1:02:27 PM

Item ID: 647.9711

Accept

Revision ID:

Item Name: Upper Body

Start Date: 5/01/13 Start Qty: 95.00

\*95\*

Required Date: 5/01/13 Req'd Qty: 95.00

\*95\*

Reference:

Approvals: Process Plan: MCD

Date: 3-04-23

Tooling:

Setup Start \*NS1\*

Stop \*NS2\*

Cust Item ID:

Customer:

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

647.9700

N/A

100

\*100\*

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank at 7.425"

0.00

0.00

0.00

0.00

110

\*110\*

HAAS

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB183

DWG REV: 4/14FOLIO REV: AA

2- deburr and break all sharp edges

DAS

02

03

25

13

05

21

95 10

DAS

03

08

08

NCR: Yes / No

DQA: Date: .

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS									
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>							
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data	<input type="checkbox"/>														
Equip/Tooling	<input type="checkbox"/>														
Operator	<input type="checkbox"/>														
Material	<input type="checkbox"/>														
Setup	<input type="checkbox"/>														
Other	<input type="checkbox"/>														
Process	<input type="checkbox"/>														
Supplier	<input type="checkbox"/>														
Training	<input type="checkbox"/>														
Unapproved	<input type="checkbox"/>														
<b>FAULT CATEGORY</b>															
<b>Landing Gear</b> <input checked="" type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio				<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	

**Work Order ID 100355**

April-22-13 1:02:27 PM

Item ID: 647.9711

Accept

**\*100355\***

Page 2

Revision ID:

Item Name: Upper Body

Start Date: 5/01/13 Start Qty: 95.00 **\*95\***Required Date: 5/01/13 Req'd Qty: 95.00 **\*95\***

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

DAG

120

**\*120\***

QC

Quality Control

Memo

0.00

D-A 13/06/12

95 0

08

9-88

130

**\*130\***

QC

Quality Control

QC8- Inspect parts - second check

0.00

2/13-6-19

Memo

0.00

131

**\*131\***

HandFinish

Hand Finishing

Memo

0.00

Clean &amp; remove all part markings (acid etch only)

95 2/13-7-12

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS								
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>								
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>									
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>									
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data														
Equip/Tooling														
Operator														
Material														
Setup														
Other														
Process														
Supplier														
Training														
Unapproved														
FAULT CATEGORY														
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio				<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	

**Work Order ID 100355**

April-22-13 1:02:27 PM

**\*100355\***

Page 3

Item ID: 647.9711

Accept

Revision ID:

Item Name: Upper Body

Start Date: 5/01/13 Start Qty: 95.00

**\*95\***

Required Date: 5/01/13 Req'd Qty: 95.00

**\*95\***

Reference:

Approvals: Process Plan:

Date: \_\_\_\_\_ Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start **\*NR1\***

QC:

Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursTool ID Tool # Plan  
Code Accept Reject Reject  
Qty Qty Number Insp.  
Stamp

140

**\*140\***

Outsource4

Outsource process - Anodize

Memo

Issue P/O: 120560  
Black Anodize as per Dwg 647.9700

CL13102112 95

150

**\*150\***

Packaging

Packaging

Memo

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

95 X

SP  
13-8-14

155

**\*155\***

QC

Quality Control

Memo

QC5- Inspect part completeness to step on W/O

0.00

0.00

dAS  
27  
B. 8/15

95

Count

NCR: Yes / No

DQA: Date: .

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Turning Sequence Wave/Twist in Tube				General Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/>		Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/>		Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/>		Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other <input type="checkbox"/>	

Work Order ID 100355

April-22-13 1:02:27 PM

Item ID: 647.9711

Accept

Revision ID:

Item Name: Upper Body

Start Date: 5/01/13 Start Qty: 95.00

\*95\*

Required Date: 5/01/13 Req'd Qty: 95.00

\*95\*

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run

Start

\*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/  
Work Center ID

160

\*160\*

SprayPaint

Spray Painting

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

0.00

C2 13/07/12-95

170

\*170\*

QC

Quality Control

QC14- Inspect Spray Paint

0.00

*u/s 13/07/12*

0.00

180

\*180\*

Packaging

Packaging

Identify as per dwg & Stock Location: MF

0.00

*u/s 13/07/12*

0.00

\*\*\*IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV\*\*\*

95x

*SD*  
13-8-15

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order ID 100355

April-22-13 1:02:27 PM

\*100355\*

Page 5

Item ID: 647.9711

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Upper Body

Stop

\*NS2\*

Start Date: 5/01/13 Start Qty: 95.00

\*95\*

Cust Item ID:

Required Date: 5/01/13 Req'd Qty: 95.00

\*95\*

Customer:

Reference:

Approvals: Process Plan:

Date: \_\_\_\_\_ Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run

Start

\*NR1\*

QC:

Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							

\*190\*

QC

Quality Control

Memo

0.00

MW 108-11

MW 108-15

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>		
			Work Order Update <input type="checkbox"/>			Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>		
						Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>		
						Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance			Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
				Bending <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>				
				Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>				
				Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>				
				Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>				
				Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Part Moved <input type="checkbox"/>					
				Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>					
				Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>				
				Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>						
				Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>						
				Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>						
				Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>						

# Picklist Print

April-22-13 1:02:27 PM

Page 1

Work Order ID: 100355

Parent Item: 647.9711

Parent Item Name: Upper Body

Start Date: 5/01/13

Required Date: 5/01/13

Start Qty: 95.00

Required Qty: 95.00

Comments: IPP REV:A NEW ISSUE JFS 13/04/10 VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X1.000 7075-T6 BAR 5.000" X 1.000"		Purchased	No			100	f	48.1600	0.619	61.959.375			

Location	Loc Qty	Loc Code
MAT008	48.16	

125341	Y67	48.16
--------	-----	-------

125554 x 28

x 41.875

x 17.5

DAS 02 13-05-21  
8-89

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS						
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>	Equip/Tooling <input type="checkbox"/>	Operator <input type="checkbox"/>	Material <input type="checkbox"/>	Setup <input type="checkbox"/>	Other <input type="checkbox"/>	Process <input type="checkbox"/>	Supplier <input type="checkbox"/>	Training <input type="checkbox"/>	Unapproved <input type="checkbox"/>		
FAULT CATEGORY											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube					General						
					<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Pressure/Forced			
					<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Temperature/Cure			
					<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Weld			
					<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Wrong Stock Pulled			
					<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved				
					<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong				
					<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Other			
					<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset					
					<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration					
					<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence					
					<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions					

APICAL  
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

03859

SHEET 1 OF 4

DWG NO. 647.9700

REV: N/C

PREPARED  
BY

B. PETERS

DATE: 04/11/13

EFFECT ON DWG  
 INC.  UNINC.

DWG TITLE: CUTTER SUB ASSYS

APPROVED BY:

ENGR *[Signature]*

MFG

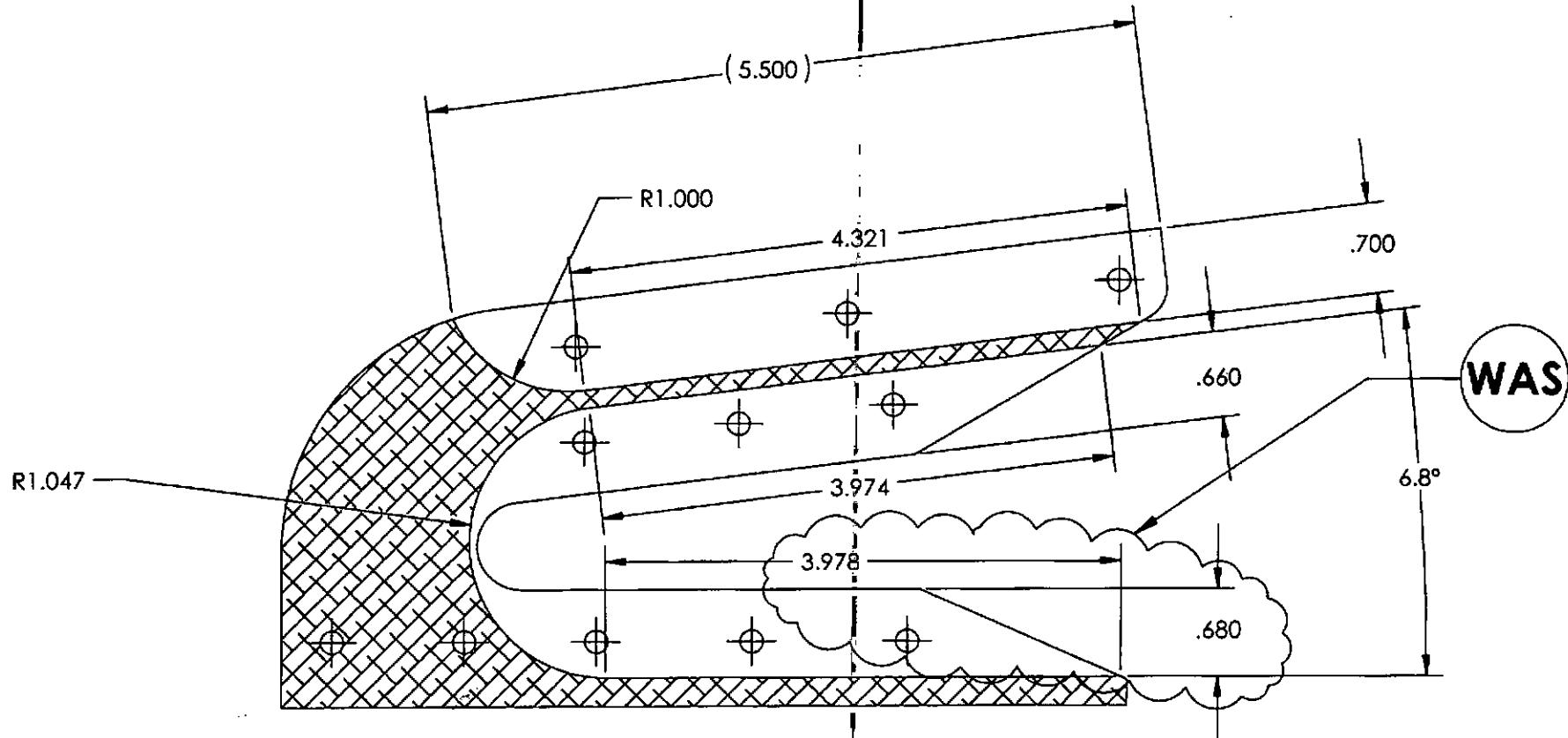
*[Signature]*

QC

*[Signature]*  
EFF. NEXT ORDER

TRANSACTION CODES (TC):  
A-ADD  
R-REVISE  
C-CREATE  
D-DELETE

REASON: REVISED CUTTER BODY DIMENSIONS, ADDED INSPECTION DIMENSIONS, AND  
INCORPORATED ECN 03029.



**SHEET 3, ZONE C5 WAS:**

DOCUMENTS EFFECTED:

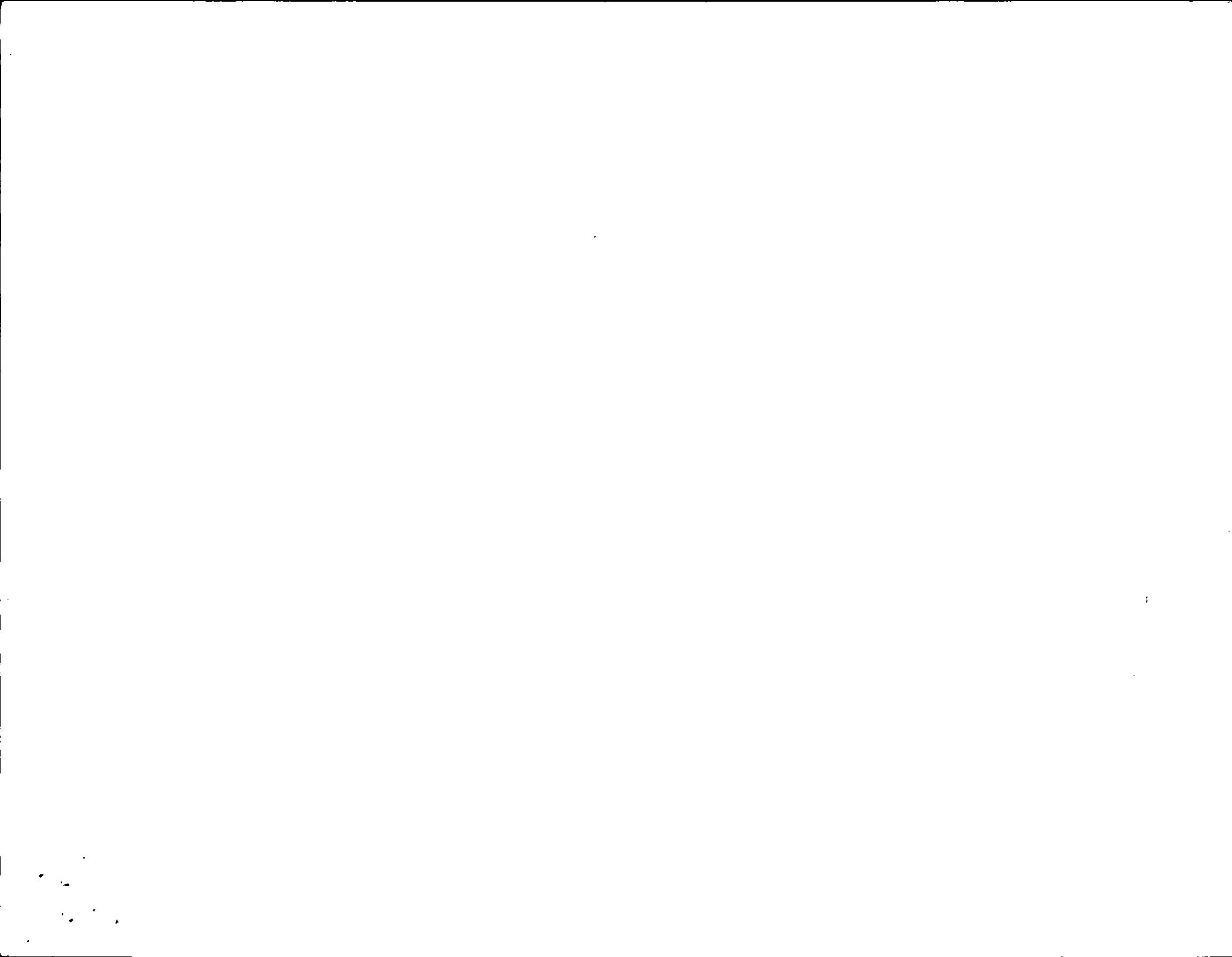
MDL  INSTALL INSTRUCTIONS  ICA  FMS  BOM

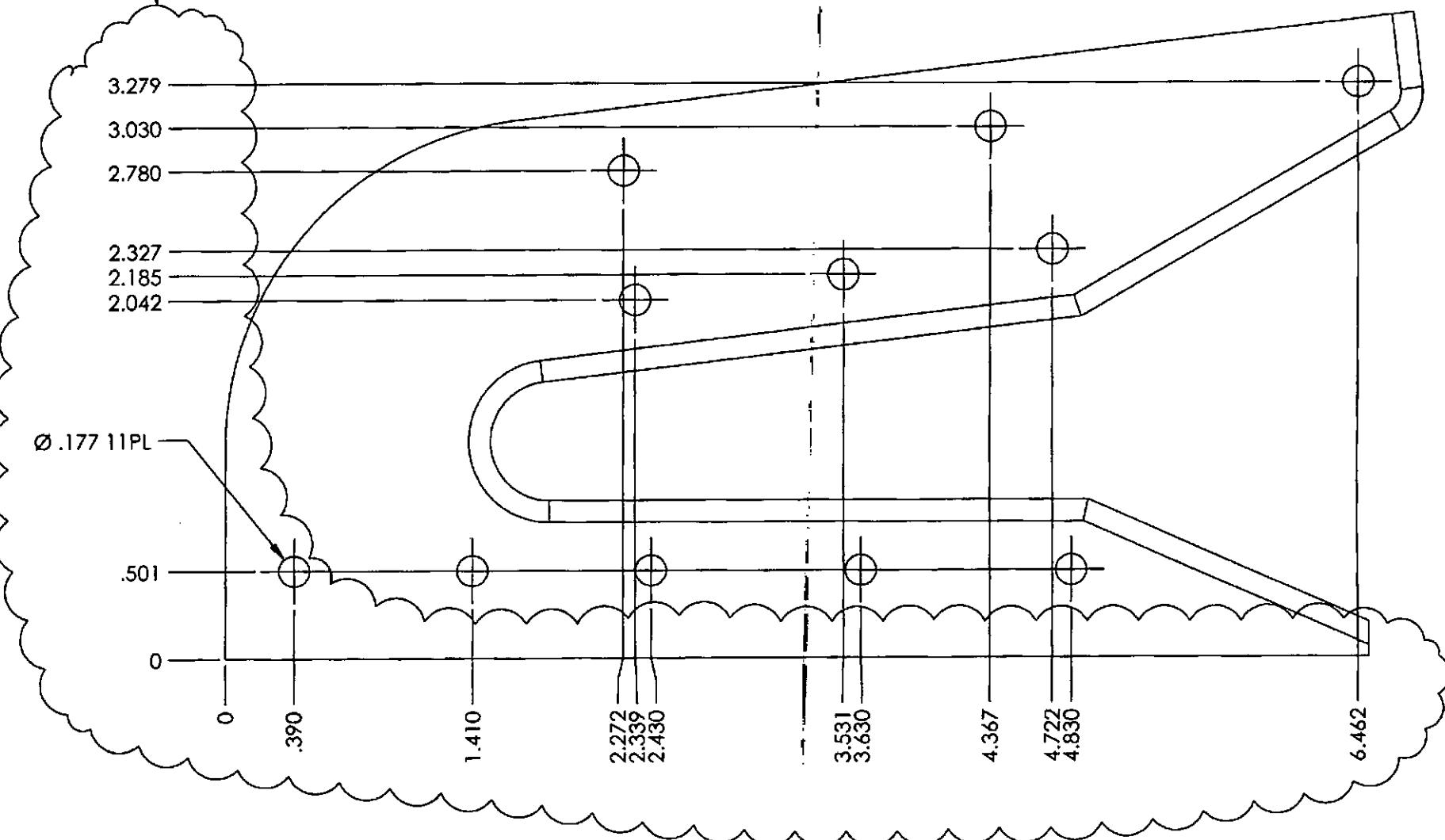
CHANGE CATEGORY

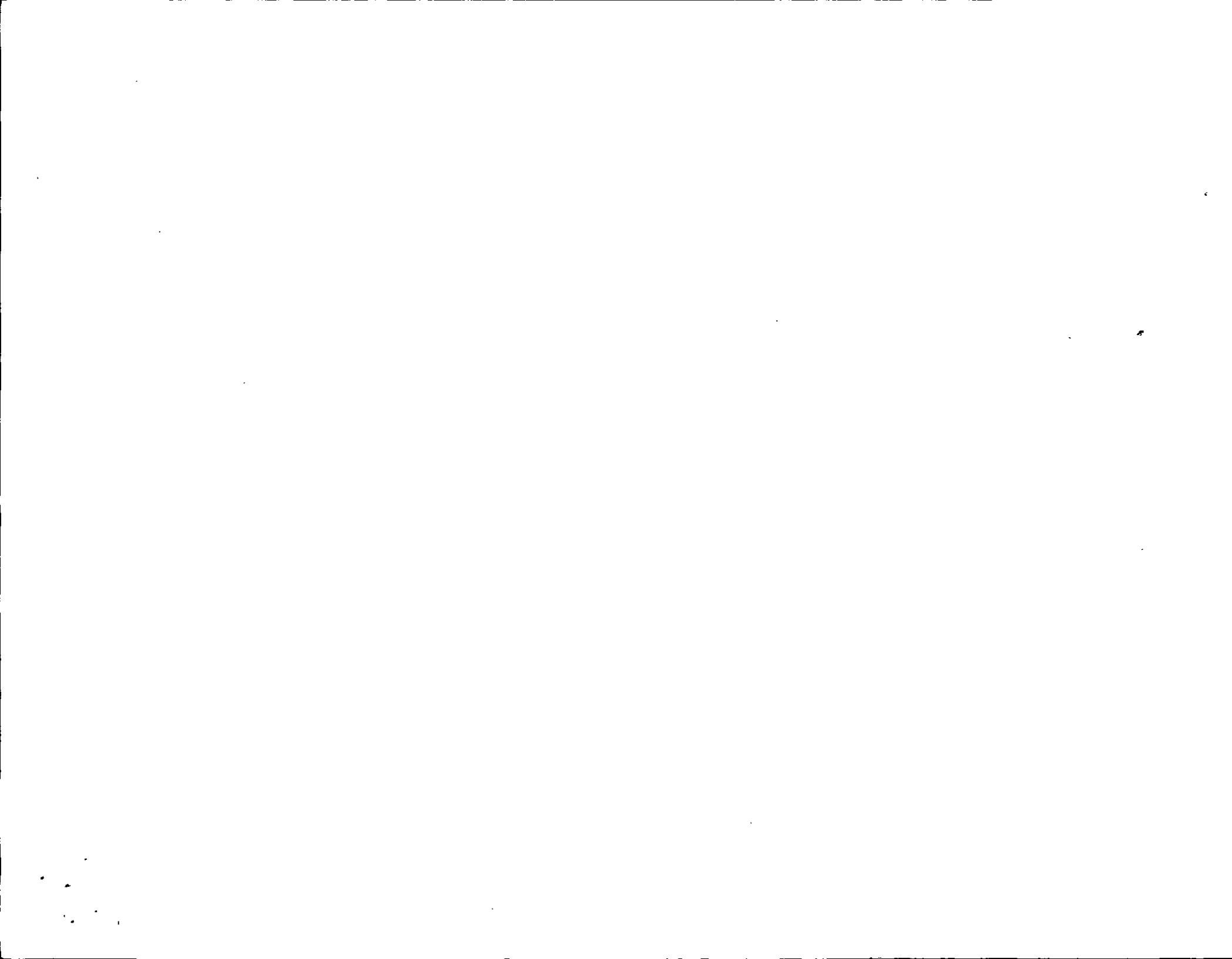
MAJOR  MINOR

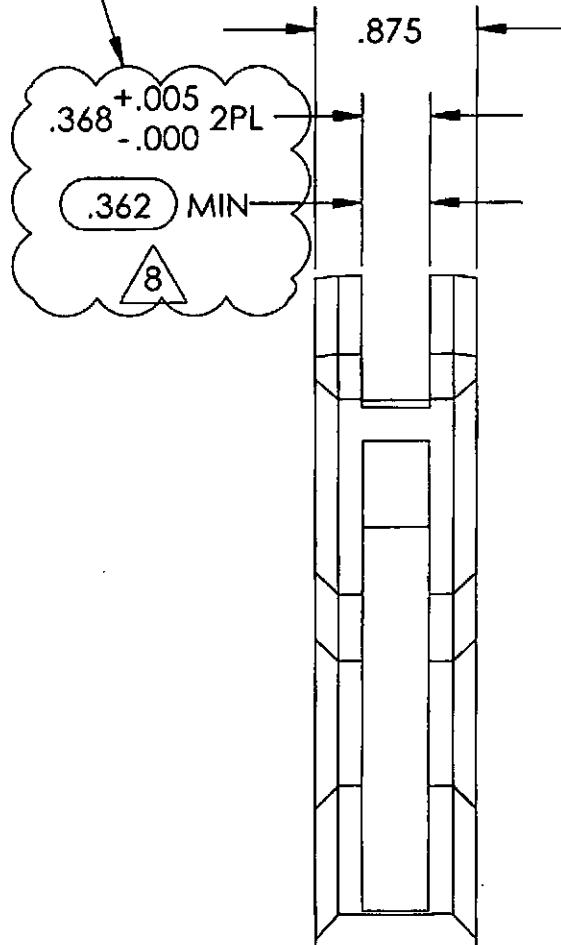
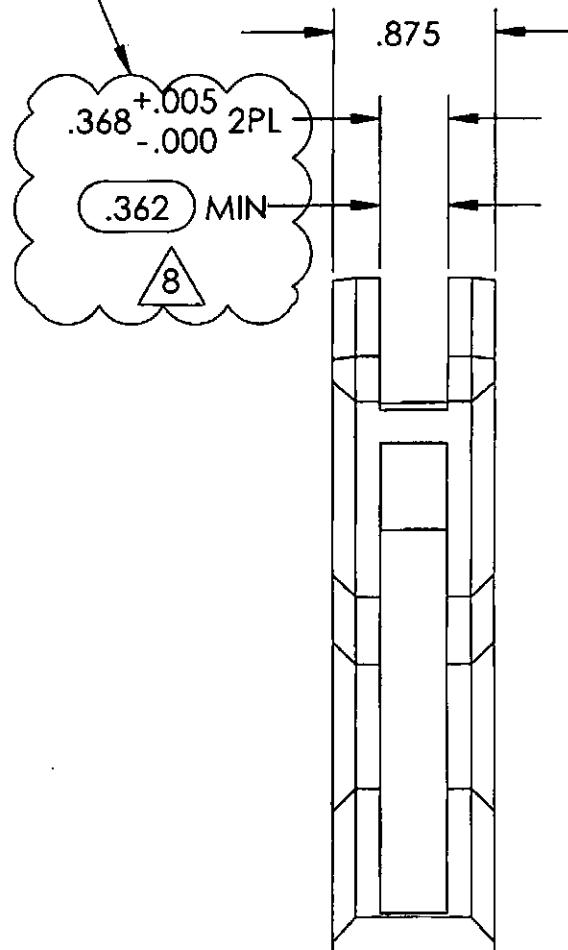
DER REVIEW REQUIRED

YES  NO

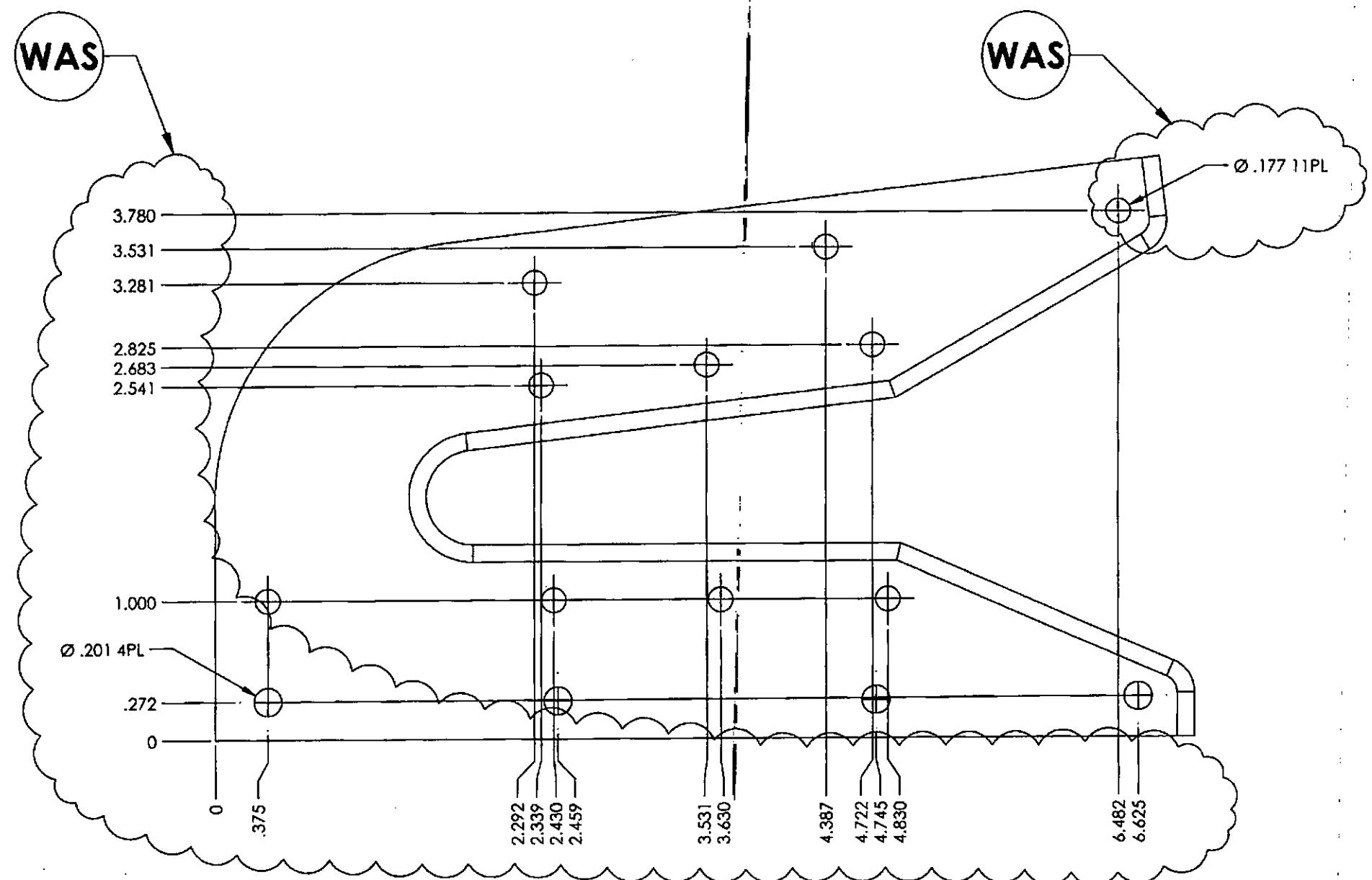


**WAS****SHEET 4, WAS:**

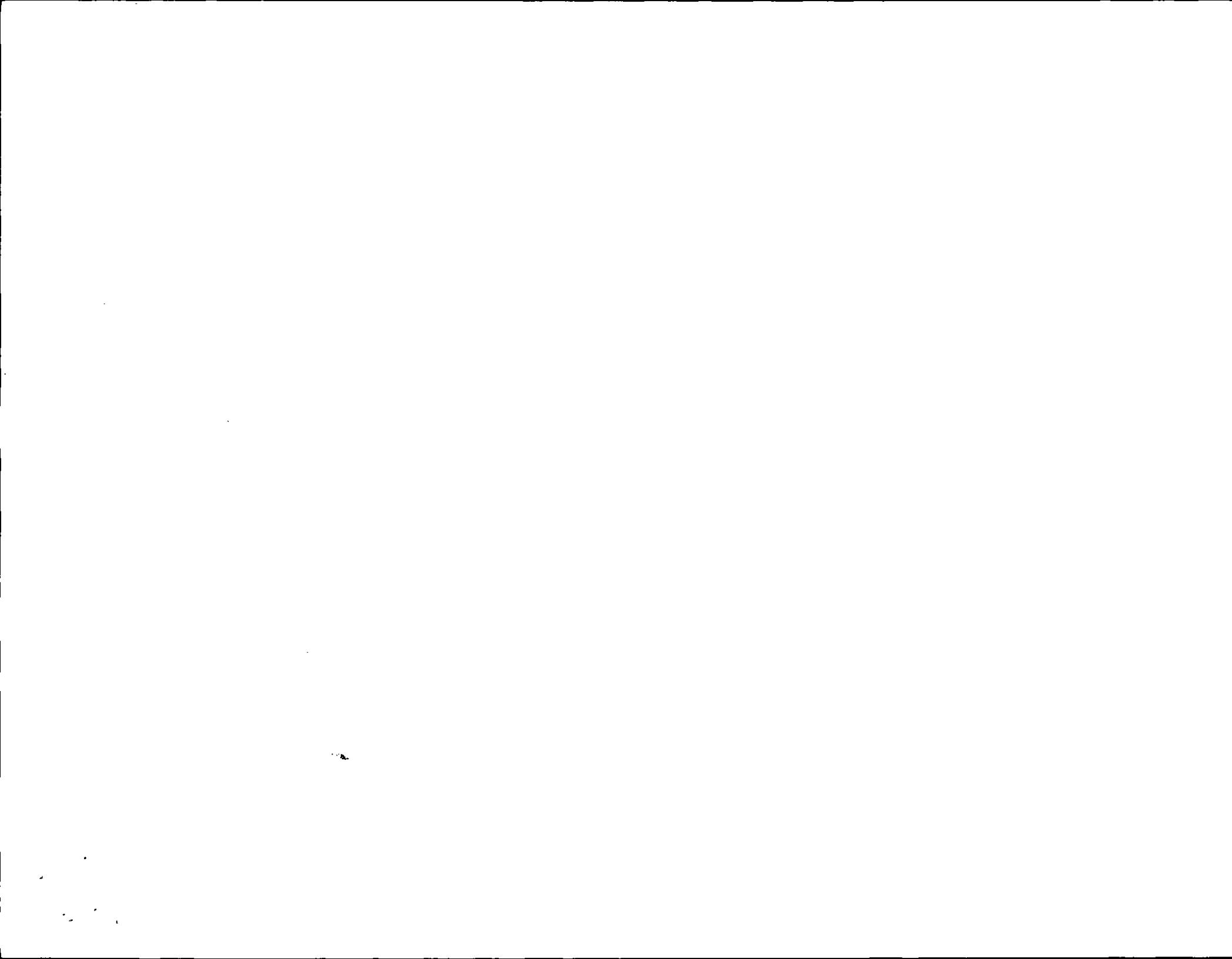


**WAS****WAS****SHEET 2, ZONE B6 WAS:****SHEET 5, ZONE B6 WAS:**





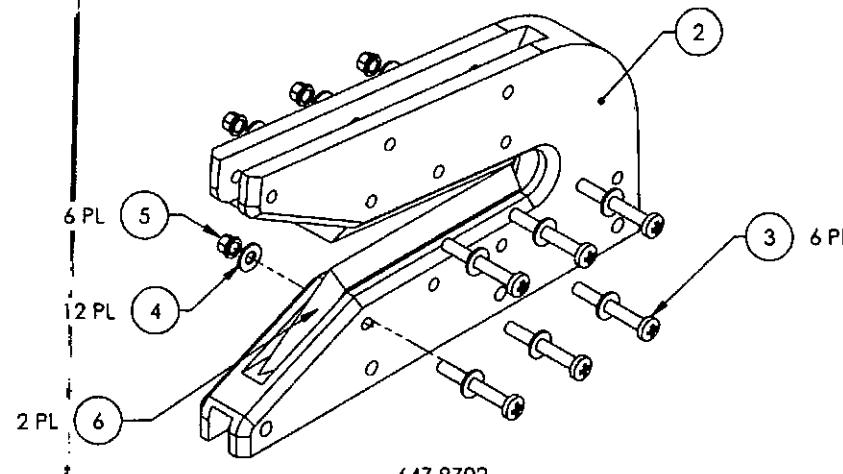
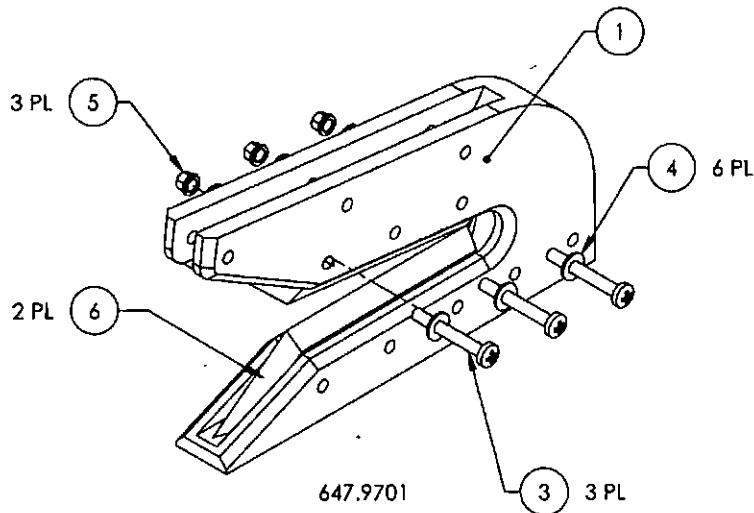
**SHEET 7, WAS:**



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AFICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT  
THE WRITTEN PERMISSION OF AFICAL INDUSTRIES IS PROHIBITED.

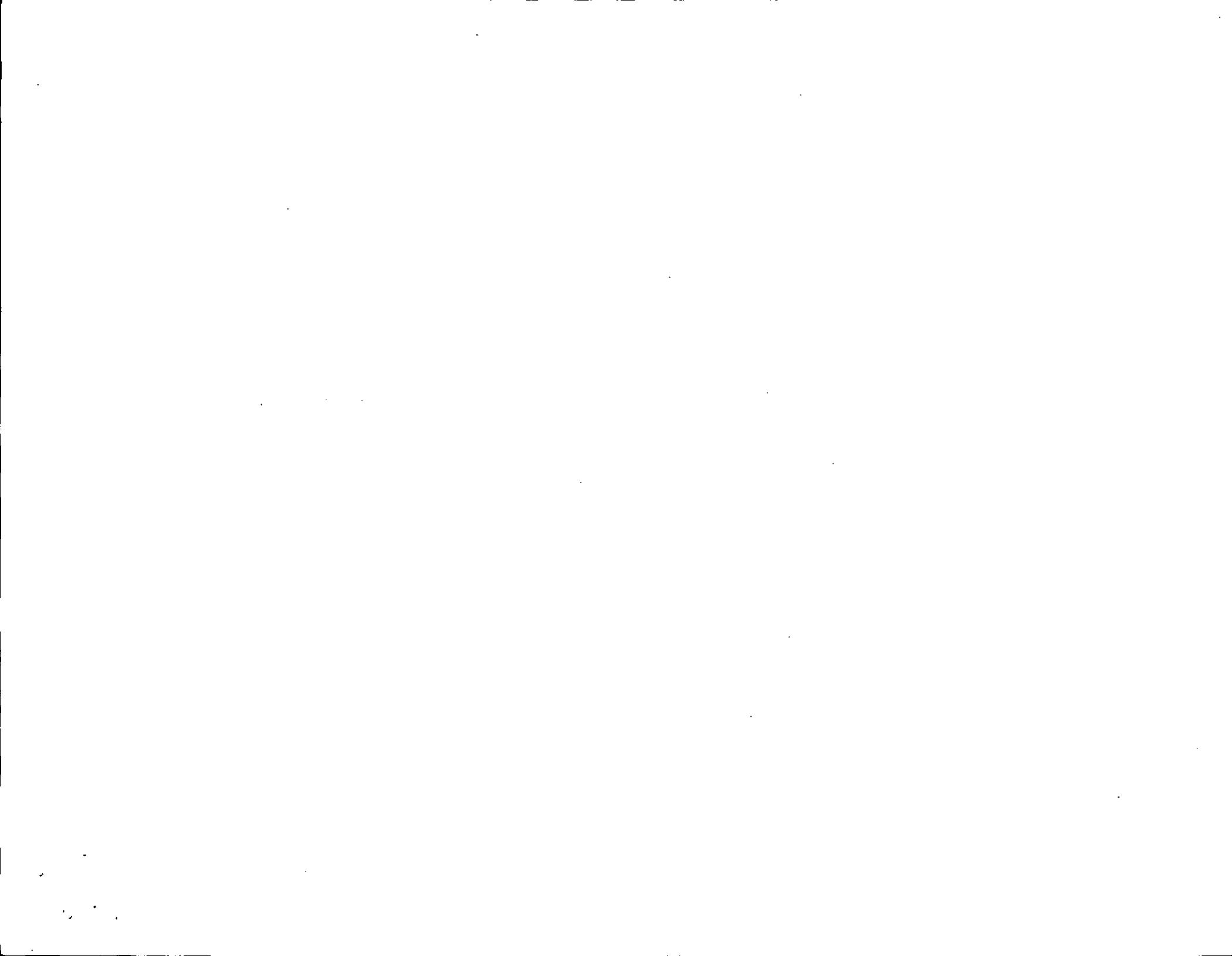
**NOTES:**

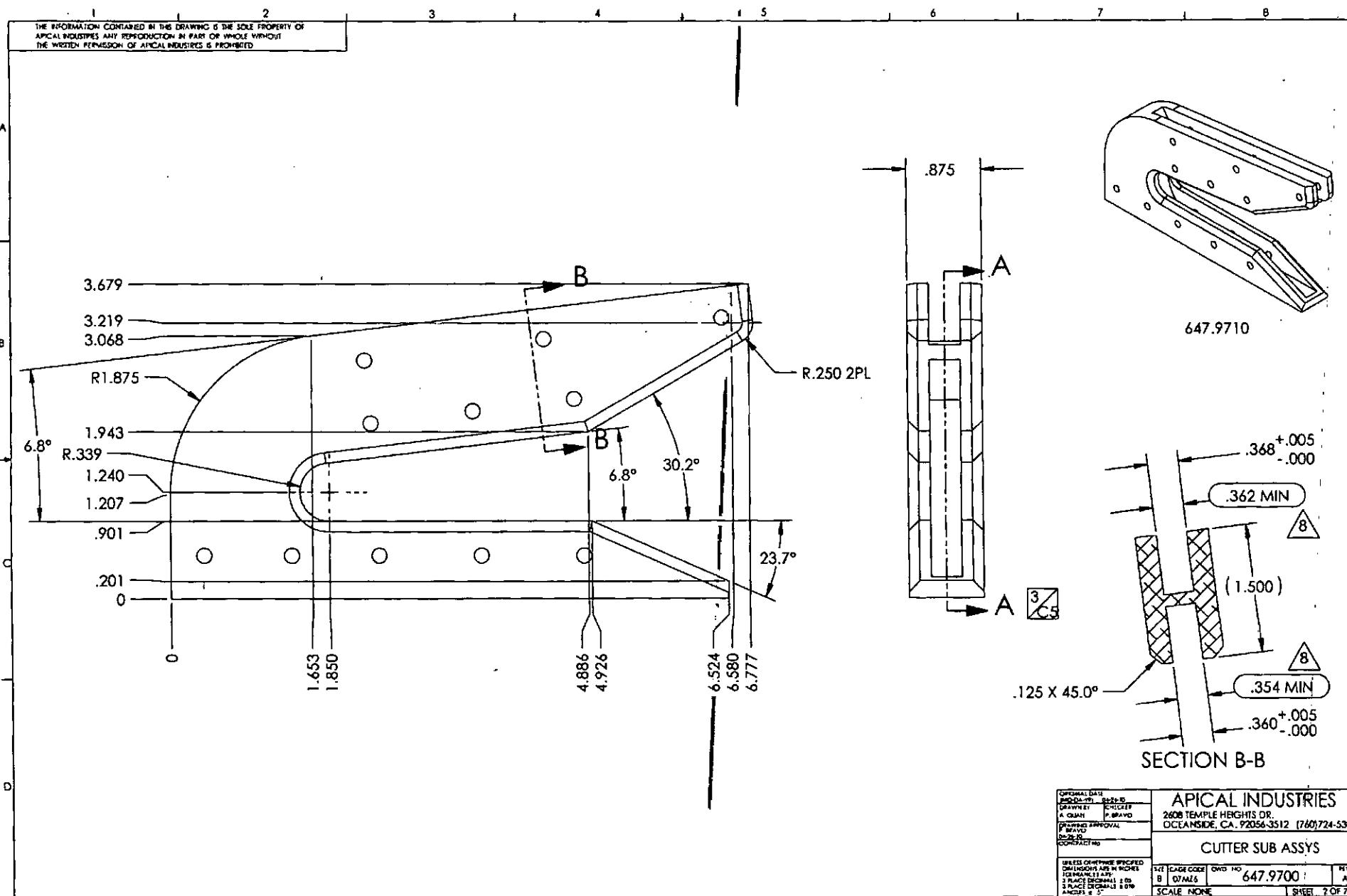
- ⚠ MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- ⚠ FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III,  
CLASS 2, COLOR BLACK;  
PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER;  
PRIME IAW MIL-P-2337J TYPE 1 CLASS N; 1-2 MIL MAX.
- 4. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED.
- 5. IDENTIFY IAW MPP-120.
- ⚠ APPLY F/N 7 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6 UPON ASSEMBLY.
- ⚠ CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE.
- ⚠ DIMENSION SHOWN IS FOR INSPECTION AFTER FINISH.



A/R	A/R	7	601.2764	RIV	LOCTITE 598	
2	2	6	646.9711	BLADE		
6	3	5	601.1541	LOCKNUT	MS21042LD8	
12	6	4	601.2764	WASHER	NAS1149FN832P	
6	3	3	601.2765	SCREW	MS27089-0819	
1		2	647.9711	UPPER BODY	▲	▲
	1	1	647.9710	LOWER BODY	▲	▲
			647.9702	UPPER CUTTER ASSY		
			647.9701	LOWER CUTTER ASSY		
.9702	.9701	FIND #	PART #	DESCRIPTION	MATL	SPEC.

QTY	ORIGINAL DATE 11/02/95 04-26-95	PARTS LIST		
NEXT ASSY (S) 647.9200	DEPART BY RECEIVER MANO P/N APPROVAL P/N APPROVAL CONT ACT P/N	<b>APICAL INDUSTRIES</b> 2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
<b>CUTTER SUB ASSYS</b>				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 1/16" TOLERANCE 2 PLACE DECIMALS = .02 3 PLACE DECIMALS = .010 4 PLACE DECIMALS = .0010 ASME Y14.5M-1983				
SHE: CAGI CODE: B 07/26		DRW: NO: 647.9700	REV: A	
SCALE: NONE		SHEET: 1 OF 1		



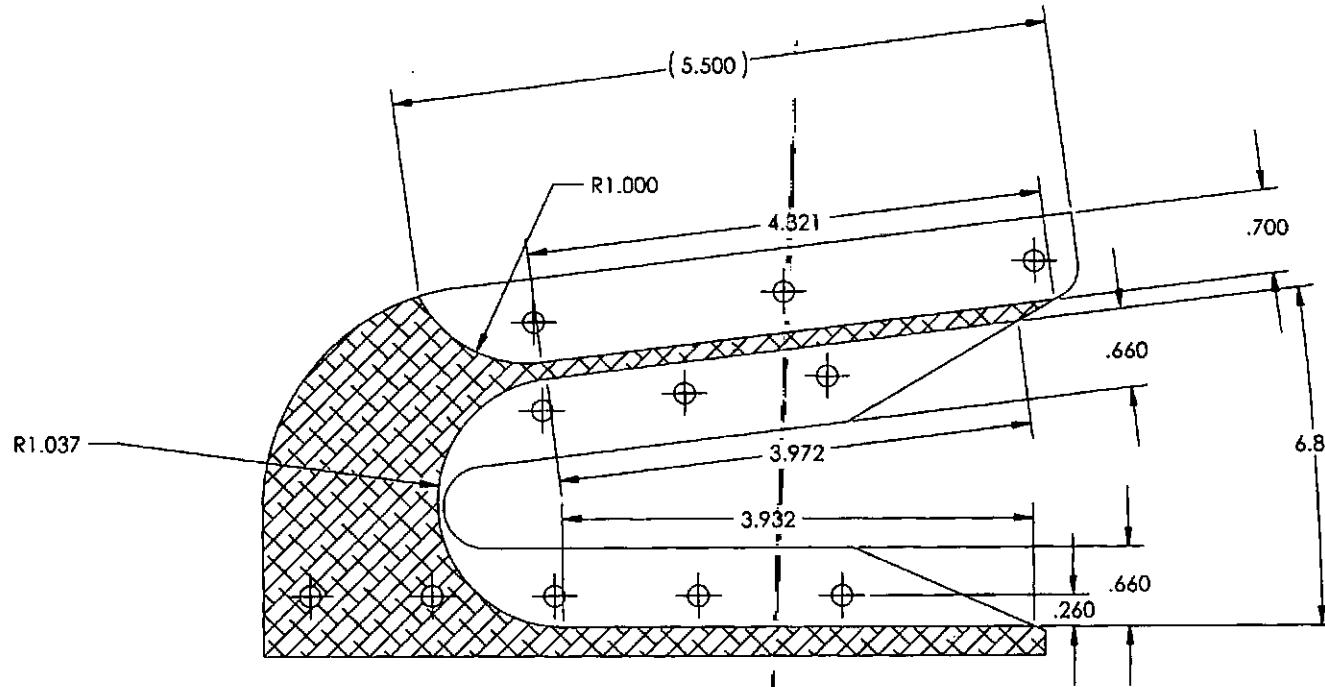


ORIGINAL DATE 09-20-07 04-24-08 DRAWN BY: J. CHIQUER REVISED BY: P. BRAVO DRAWING APPROVAL 04-24-08 CONTRACTING 04-24-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE .005 FOR 1.000 IN. .003 FOR .500 IN. .002 FOR .250 IN. .001 FOR .125 IN. .0005 FOR .062 IN. .0005 FOR .031 IN.	CUTTER SUB ASSYS
SCALE: NONE	441 CASE CODE CWD NO 647.9700 : REV A B DETAILS SCALE: NONE SHEET 2 OF 7



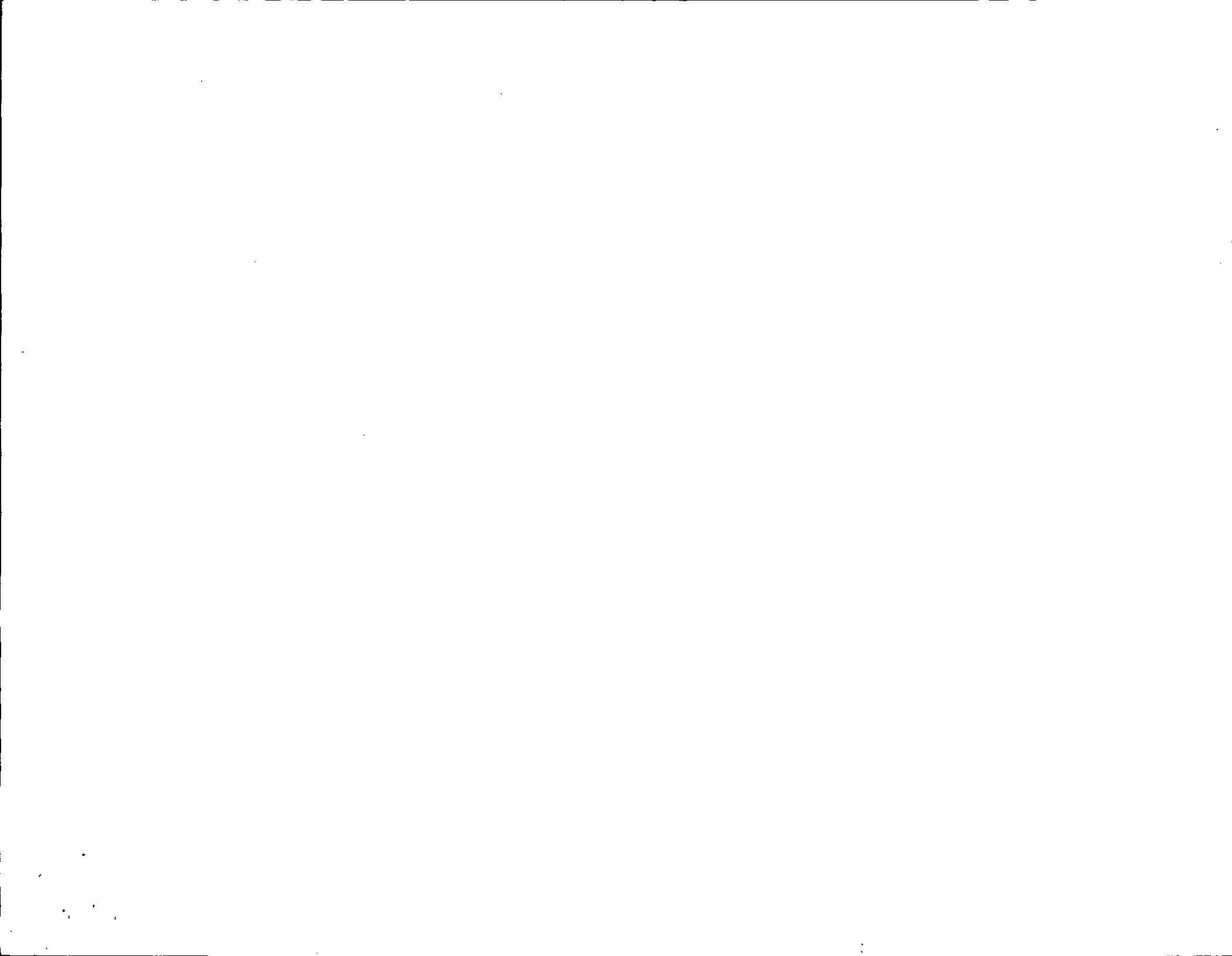
1 2 3 4 5 6 7 8

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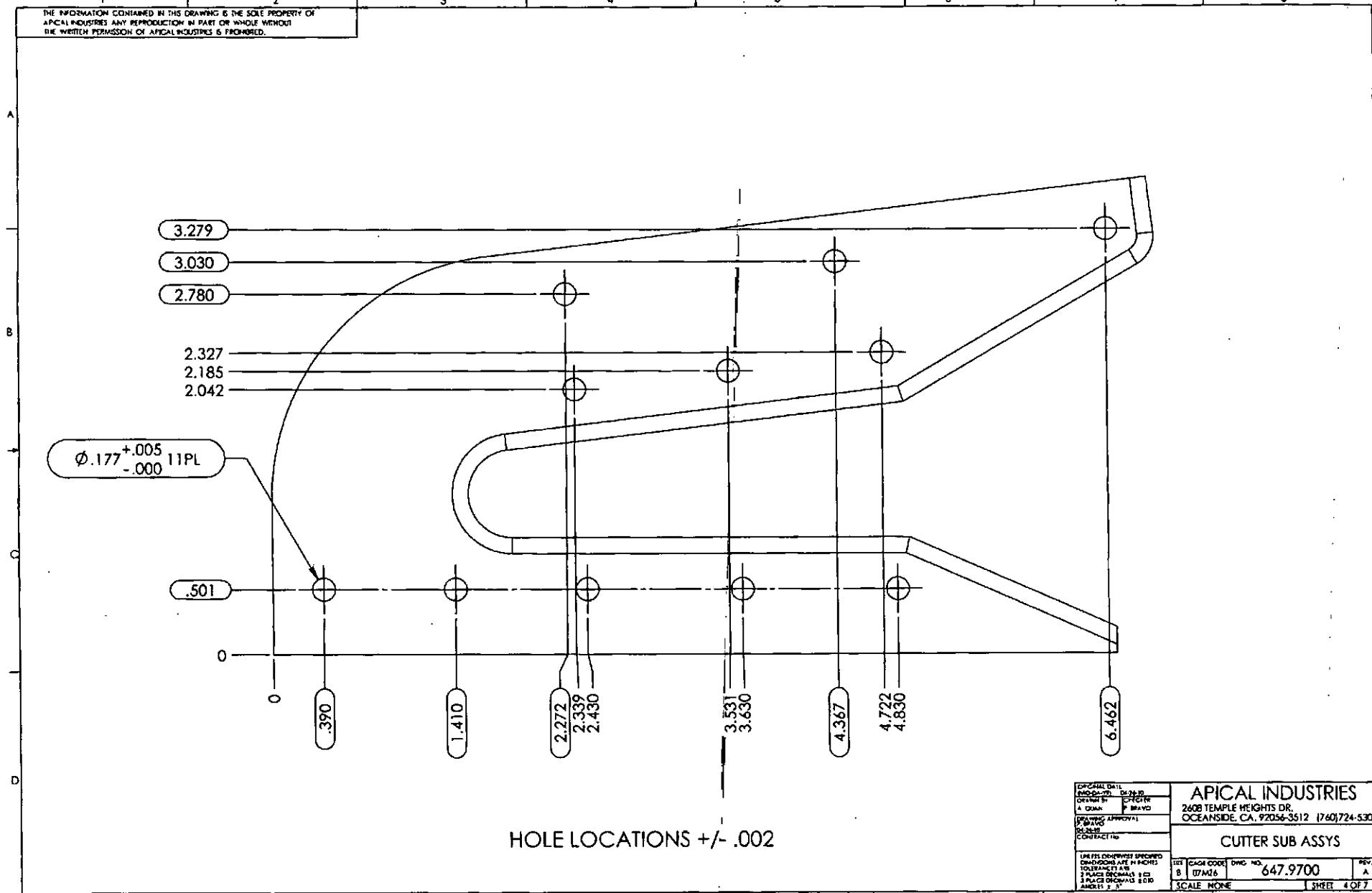


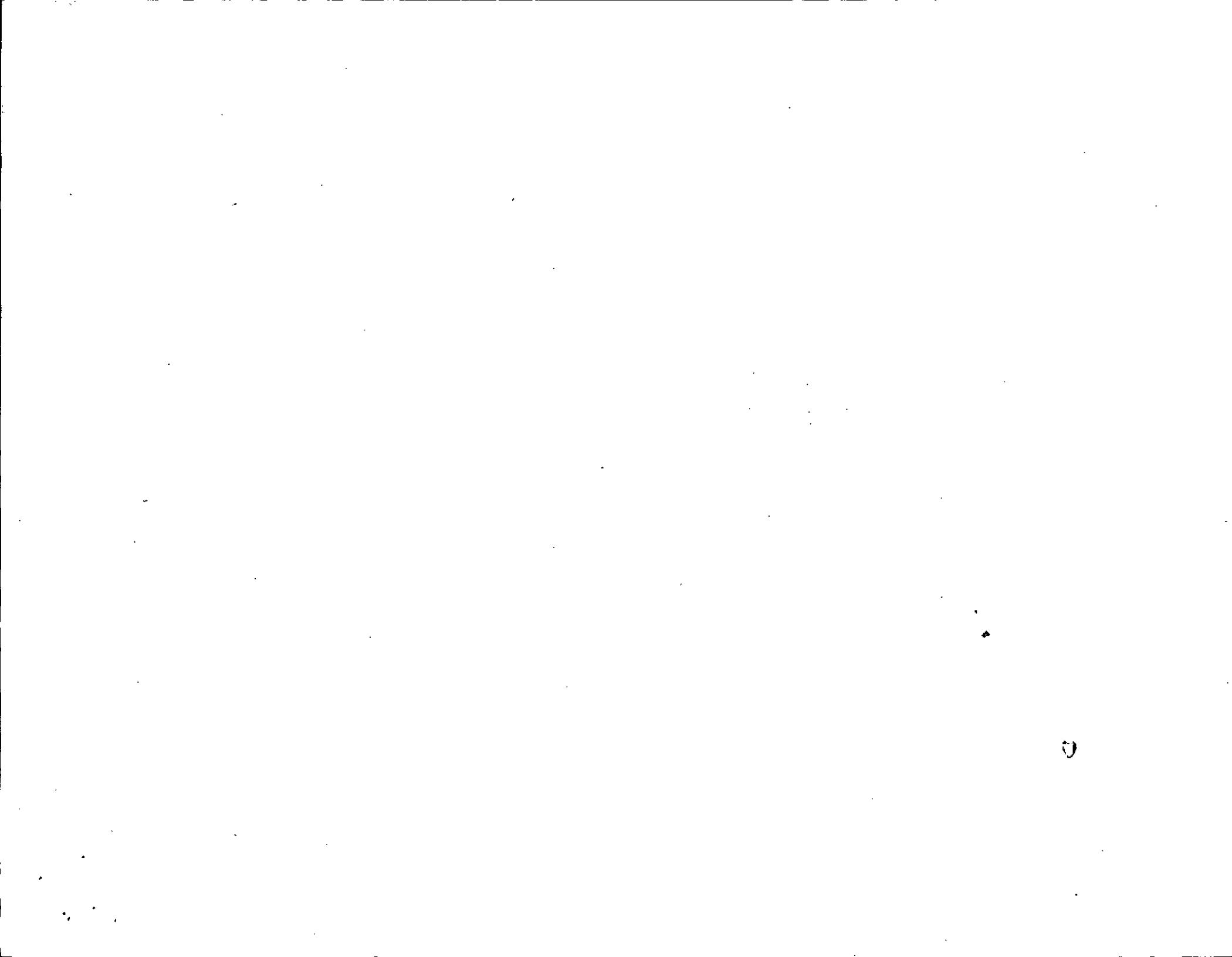
SECTION A-A [2] B6

ORIGINAL DATE 05-26-10	REVISION DATE 06-26-10
DRAWN BY • CUNN	SPECIFIER • BRAVO
DRAWING APPROVAL	
06-26-10	
COMPLIMENT TO	
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300	
CUTTER SUB ASSYS	
UNITED STATES ENGLISH SPEC'D DIMENSIONS ARE IN INCHES TOLERANCES ARE .005 INCHES MAX. AND MIN. 3 PLACES DECIMALS 2 DGS ARO 13.3 .3"	REV CAGE CODE: DMO. NO: 647.9700 B DMYA SCALE NONE 1 SHEET 3 OF 7



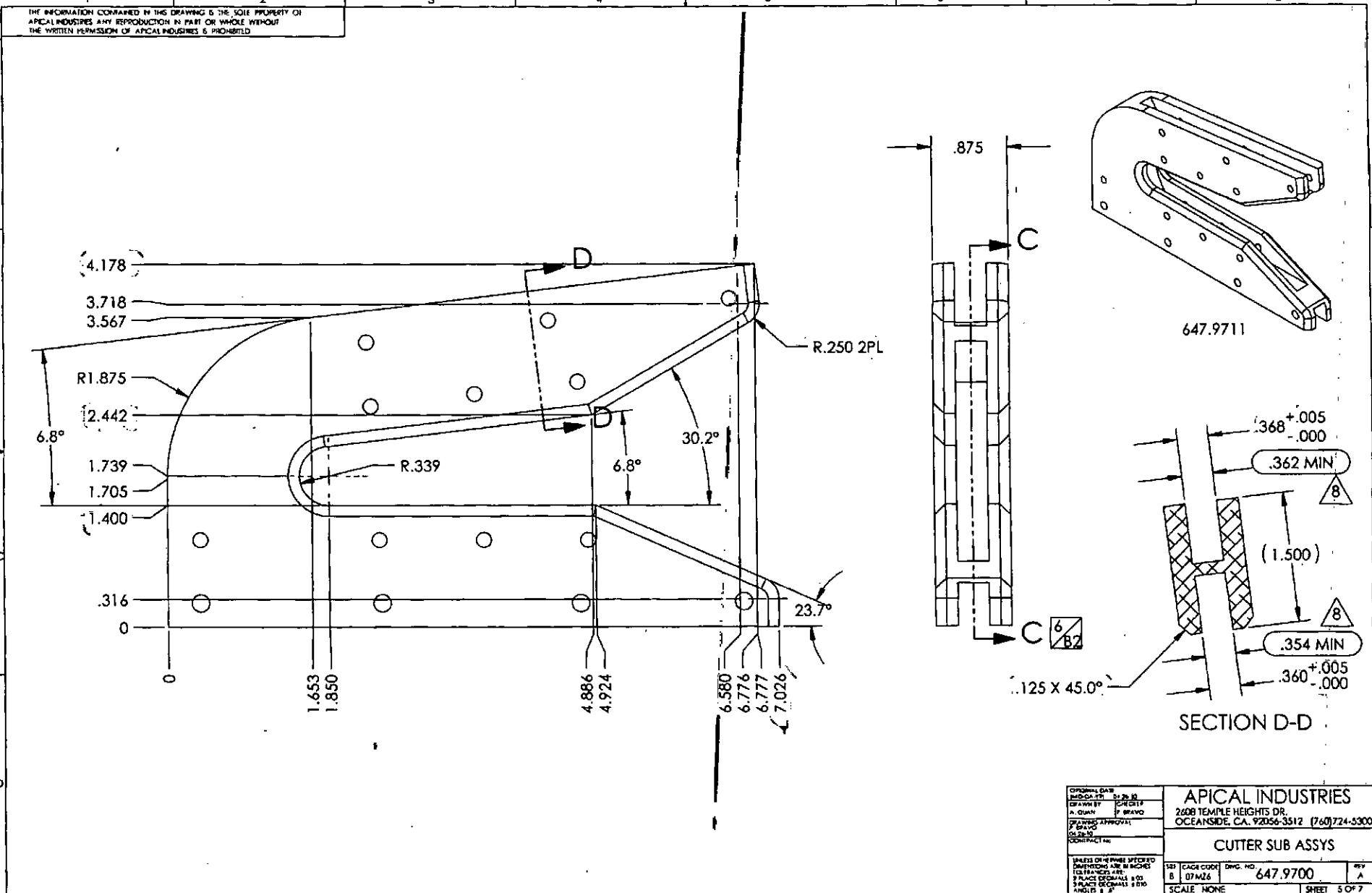
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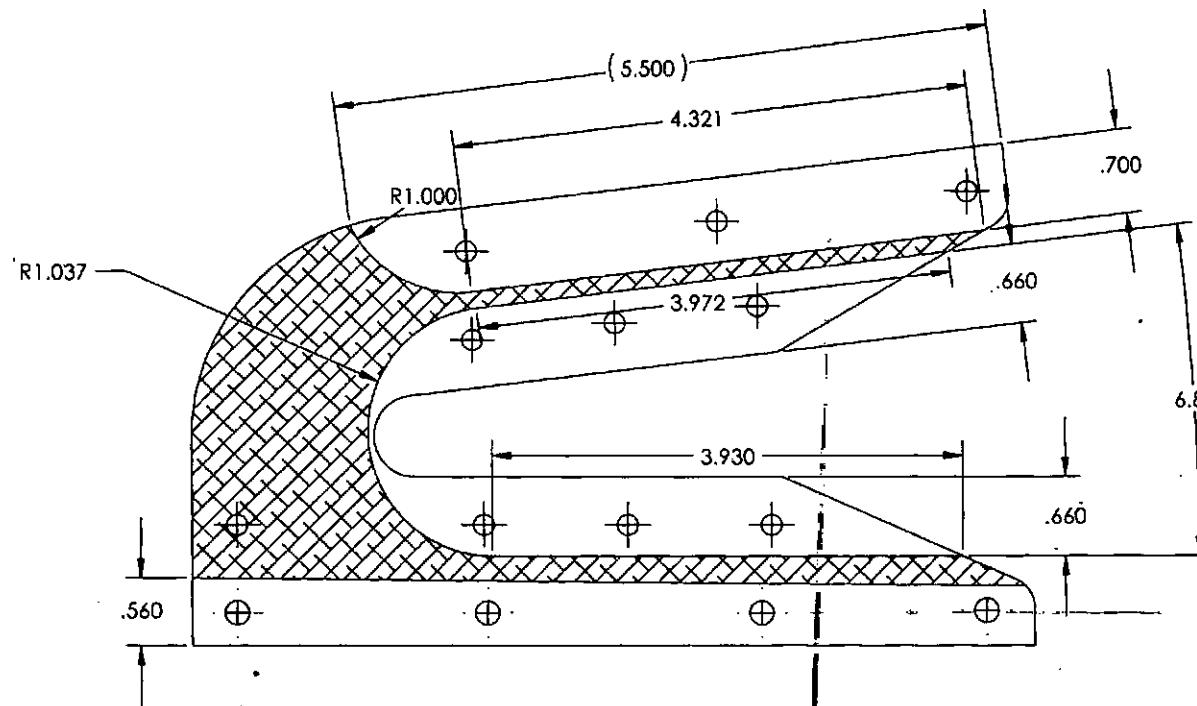
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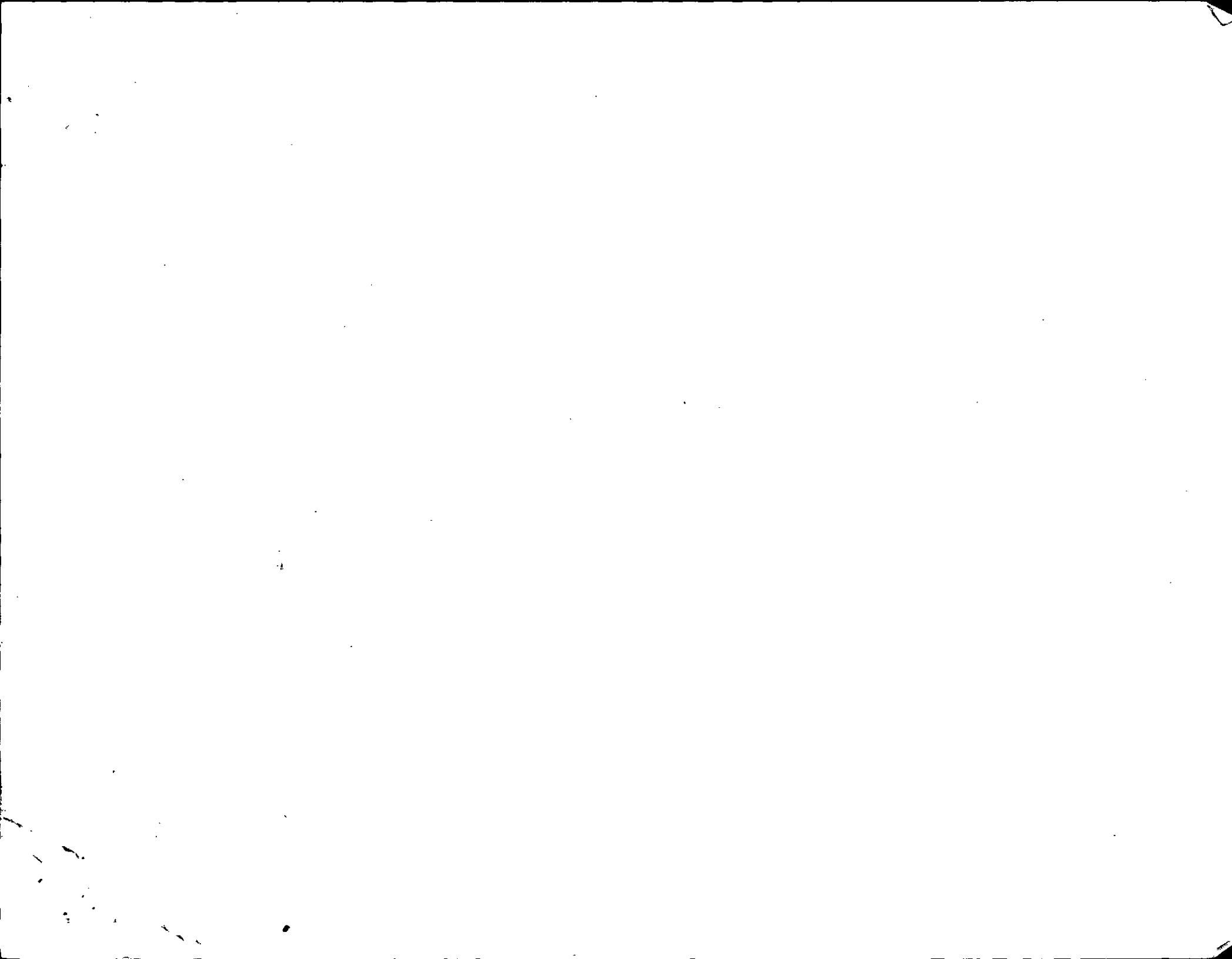
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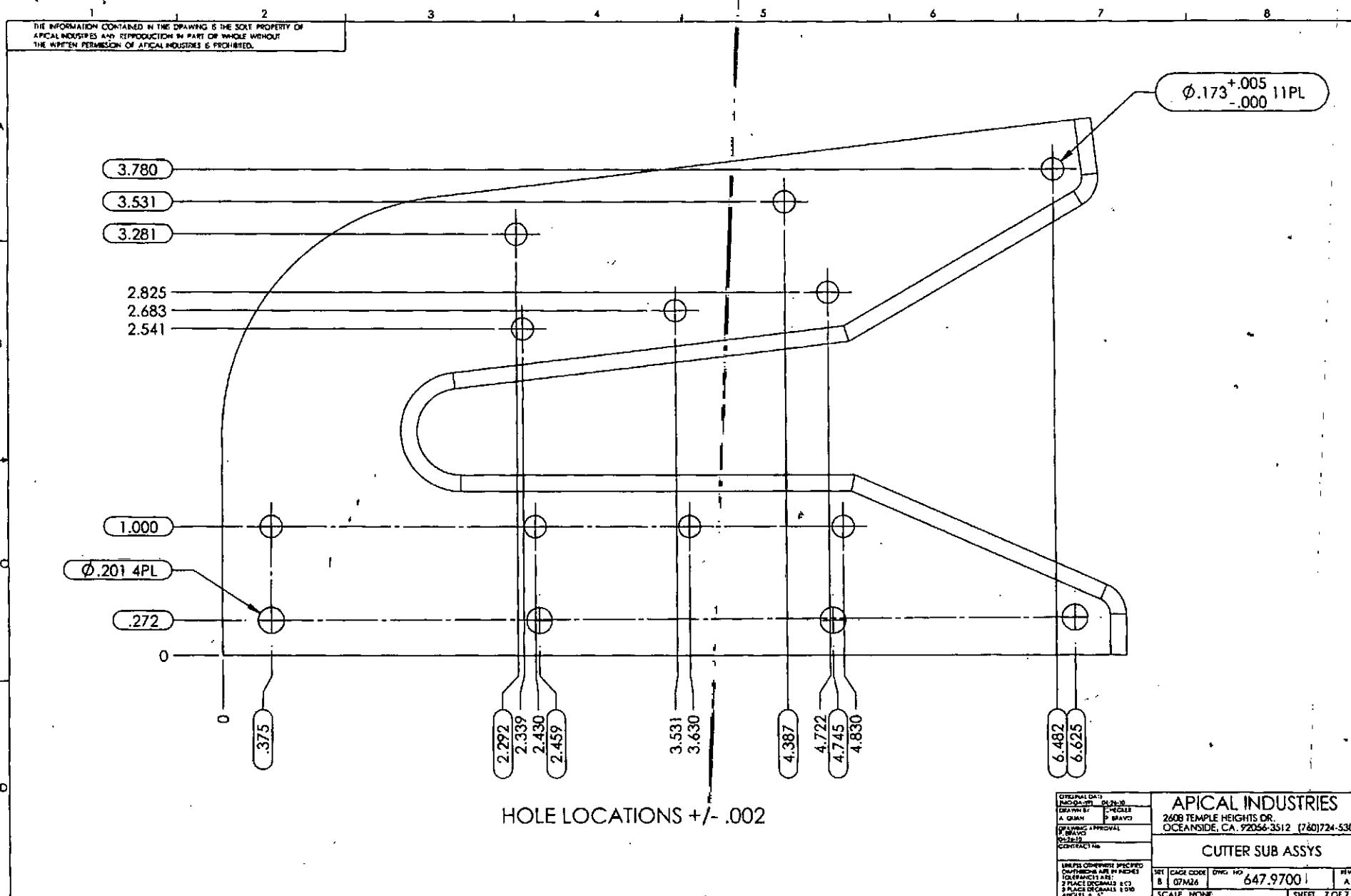


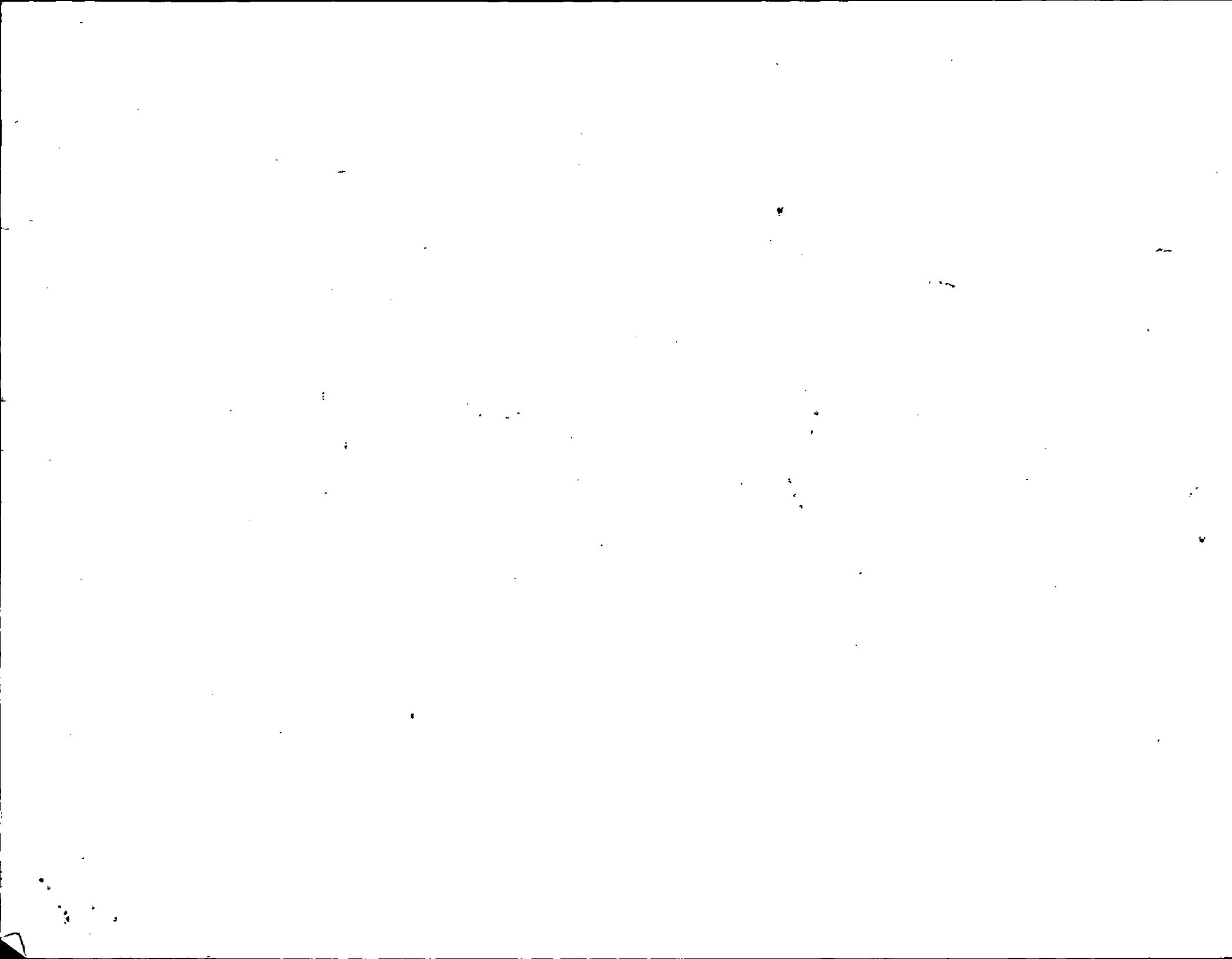
SECTION C-C

5  
86

ORIGINAL DATE	07/10/10	REVISED DATE	07/10/10
DRAWN BY	A. GILAH	checked	P. BRAVO
PREVIOUS APPROVAL			
DESIGNER			
CONTRACT NO.			
UNPRINTED DIMENSIONS INCHES PRINTED DIMENSIONS ARE IN MILLIMETERS TOLERANCES ARE 3 PLACE DECIMALS & 100 ARROWS & 3'	5	647.9700	REV. A
SCALE NONE			SHEET 6 OF 7







DART AEROSPACE LTD	Work Order:	100355
Description: UPPER BODY	Part Number:	647.9711
Inspection Dwg: 647.9700 Rev: A		Page 1 of 1

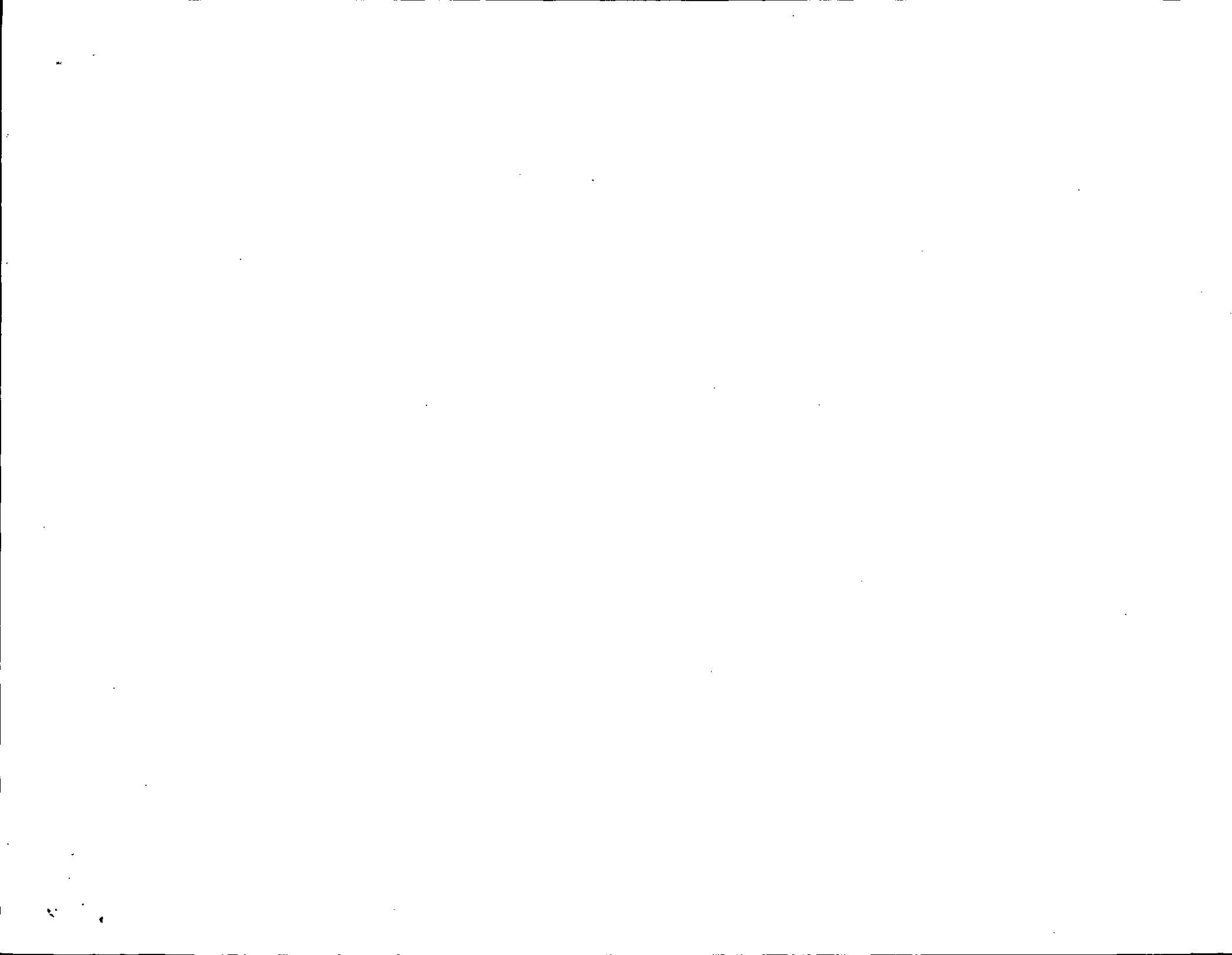
### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.178	+/-0.010	4.180	✓		H-6	31006
2.442	+/-0.010	2.444	✓		"	"
1.400	+/-0.010	1.403	✓		"	"
7.026	+/-0.010	7.027	✓		"	"
R0.250	+/-0.010	R0.250	✓		R-6	ref.
0.125x45°	+/-0.010	0.125x45°	✓		Vern	GA-01
0.360	+.005/-0.000	0.362	✓		"	"
0.368	+.005/-0.000	0.370	✓		"	"
0.560	+/-0.010	0.560	✓		"	"
R1.037	+/-0.010	R1.037	✓		R-6	ref.
R1.000	+/-0.010	R1.000	✓		"	"
0.700	+/-0.010	0.700	✓		Vern	GA-01
0.660	+/-0.010	0.660	✓		H-6	31006
6.8°	+/-5°	6.8°	✓		Angle Meter	CNC-03
0.660	+/-0.010	0.659	✓		H-6	31006
Ø0.173	+.005/-0.000	Ø0.178	✓		Vern	GA-01
3.780	+/-0.010	3.781	✓		H-6	31006
3.281	+/-0.010	3.281	✓		"	"
Ø0.201	+.005/-0.001	Ø0.201	✓		Vern	GA-01
0.272	+/-0.010	0.273	✓		H-6	31006
0.375	+/-0.010	0.376	✓		"	"
2.292	+/-0.010	2.292	✓		"	"
6.482	+/-0.010	6.481	✓		"	"

Measured by:	<u>h a</u> DAS 08	Audited by:	<u>SL</u>	Preliminary Approval:	
Date:	13/06/12 8.89	Date:	13-6-17	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15



DART AEROSPACE LTD	Work Order:	100355
Description: Upper Body	Part Number:	643.9311
Inspection Dwg: (643.9700) Rev: A		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	B.A. DAS 08 9-89	Audited by:	SL	Preliminary Approval:	
Date:	13/06/12	Date:	13-6-19	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15





A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada  
Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 62560

Date: 13-Aug-13

#### To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

#### Ship To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

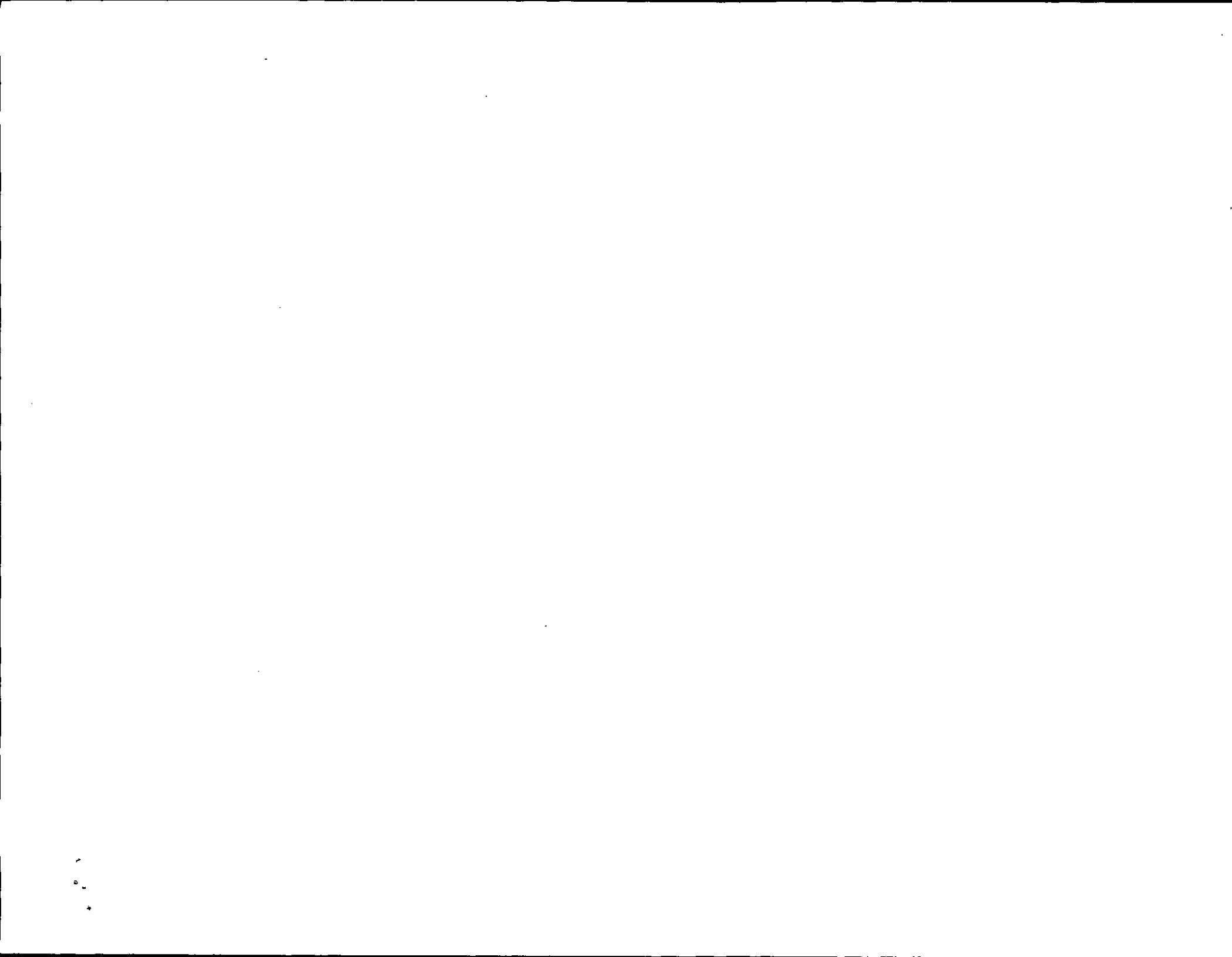
Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via
Quantity	Description
1 lot	Part: ASST Rev: 12 PCS 646.3010 14 PCS 646.3012 15 PCS 646.3310 51 PCS 646.9740 95 PCS 647.9711
	HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2
	PRIME MIL-P-23377J TYPE I CLASS N Job: 20130500 PO: 20560 Line:
	Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE: <u>13/8/13</u> CERTIFIED SIGNATURE: <u>M</u> RECEIVER SIGNATURE: _____



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO20560**

Purchase Order Date 7/12/2013  
PO Print Date 8/14/2013

Page Number 3 of 3

VC-ATG001

Ship To : DART AEROSPACE LTD

INDUSTRIES INC.  
INDUSTRIELLE ROAD  
LAND, ON K4K 1T2  
IDA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name	Buyer	Chantal Lavoie
Vendor Phone	Customer POID	
	Customer Tax #	10127-2607
Ship To Contact	Terms	Net 30
Ship To Phone	Currency	CAD
Ship Via:	FOB	Destination-Collect
Ship Acct:		
7 98918 ✓	✓ 51.00	\$14.50
	7/31/2013 Yes 7/31/2013	\$739.1
SAME AS ABOVE		
8 100355	✓ 95.00	\$14.50
SAME AS ABOVE	7/31/2013 Yes 7/31/2013	\$1,377.1
		Line Total: \$739.1
		Line Total: \$1,377.1
		PO Total: \$3,376.1

SP13-8-14

CL

Note: Pricing listed above is as per contract agreement between Dart Aerospace and the respective manufacturer.  
No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required -  YES  NO  
PST# 6122-5207

Change Nbr: 4

Change Date: 8/14/2013

